Application No. 10/626,260

AMENDMENTS TO THE CLAIMS

Please amend Claims 1, 3-6, 9, and 18 to read as shown below and add new Claims 19- 26 as shown below.

1.   (Currently Amended) A turf reinforcement mat for supporting soil, comprising:

at least one polymer net layer;

a non-woven mat comprising a plurality of multi-dimensional polymer fibers, wherein a cross-sectional geometry of respective ones of the multi-dimensional polymer fibers comprises

a substantially circular, substantially uniform core region,

~~at least three substantially concave and smoothly curved channels separating~~

at least three substantially convex and smoothly curved elongated lobes substantially equally spaced about a circumference of the core region, each elongated lobe consisting of a single, substantially symmetrical half-ellipse shaped concave member, and

at least three substantially concave and smoothly curved channels separating the elongated lobes, a portion of each smoothly curved channel comprising a plurality of points along the circumference of the core region,

said fibers being configured to break ~~breaking~~ up ~~the~~ a flow and an energy of water passing over ~~the~~ said soil and said mat; and

a polymer yarn, stitching said net layer to said non-woven mat.

2.   (Canceled)

3.   (Currently Amended) The turf reinforcement mat of claim 1, wherein each of said multi-dimensional polymer fibers ~~fiber~~ is selected from the group consisting of polyolefins, polyesters, polyamides and blends thereof.

4.   (Currently Amended) The turf reinforcement mat of claim 1, wherein each of said multi-dimensional fibers ~~have~~ has a length from about 2 inches (5 cm) to about 12 inches (30 cm).

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5.   (Currently Amended) The turf reinforcement mat of claim 1, wherein each of said multi-dimensional polymer fibers fiber has a density of from 300 denier (333 decitex) to about 2000 denier (2222 decitex).

6.   (Currently Amended) The turf reinforcement mat of claim 5, wherein each of said multi-dimensional polymer fibers fiber has a density of from 500 denier (555 decitex) to about 1100 denier (1222 decitex).

7.   (Previously Presented) The turf reinforcement mat of claim 1, wherein the polymer of said net layer is selected from the group consisting of polyolefins, polyesters, polyamides and blends thereof.

8.   (Previously Presented) The turf reinforcement mat of claim 1, further comprising a second polymer net layer, said non-woven mat being located between said first and second nets.

9.   (Currently Amended) The turf reinforcement mat of claim 1, wherein the a tensile strength of the turf reinforcement mat is at least 30% greater than the a tensile strength of an otherwise identical turf reinforcement mat having round multi-dimensional polymer fibers.

10-17. (Cancelled)

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18.   (Currently Amended) A turf reinforcement mat for supporting soil, comprising:

at least one polymer net layer; and

a non-woven mat attached to said polymer net layer, said non-woven mat comprising multi-dimensional polymer fibers, wherein a cross-sectional geometry of respective ~~ones of the~~ multi-dimensional polymer fibers comprises

a substantially circular, substantially uniform core region,

~~at least three substantially concave and smoothly curved channels separating~~

at least three substantially convex and smoothly curved elongated lobes substantially equally spaced about a circumference of the core region, each elongated lobe consisting of a single, substantially symmetrical half-ellipse shaped concave member, and

at least three substantially concave and smoothly curved channels separating the elongated lobes, a portion of each smoothly curved channel comprising a plurality of points along the circumference of the core region,

said fibers breaking up ~~the~~ a flow and an energy of water passing over ~~the~~ said soil and said mat, and wherein said channels are ~~adapted~~ configured to capture sediment and water.

19.   (New) The turf reinforcement mat of claim 18, wherein each of said multi-dimensional polymer fibers is selected from the group consisting of polyolefins, polyesters, polyamides and blends thereof.

20.   (New) The turf reinforcement mat of claim 18, wherein each of said multi-dimensional fibers has a length from about 2 inches (5 cm) to about 12 inches (30 cm).

21.   (New) The turf reinforcement mat of claim 18, wherein each of said multi-dimensional polymer fibers has a density of from 300 denier (333 decitex) to about 2000 denier (2222 decitex).

23.   (New) The turf reinforcement mat of claim 21, wherein each of said multi-dimensional polymer fibers has a density of from 500 denier (555 decitex) to about 1100 denier (1222 decitex).

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24.   (New) The turf reinforcement mat of claim 18, wherein the polymer of said net layer is selected from the group consisting of polyolefins, polyesters, polyamides and blends thereof.

25.   (New) The turf reinforcement mat of claim 18, further comprising a second polymer net layer, said non-woven mat being located between said first and second nets.

26.   (New) The turf reinforcement mat of claim 18, wherein a tensile strength of the turf reinforcement mat is at least 30% greater than the tensile strength of an otherwise identical turf reinforcement mat having round multi-dimensional polymer fibers.

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